Safety Data Sheet

Document group:	19-5963-4	**Version number:**	5.01
Issue Date:	23/11/2017	**Supersedes date:**	25/10/2017

This Safety Data Sheet has been prepared in accordance with the New Zealand, Hazardous Substances and New Organisms Act 1996 (HSNO Act) and Regulations, as amended.

IDENTIFICATION:

1.1. Product identifier
3M 8882 High Gel Reenterable Encapsulant

Product Identification Numbers
80-6111-6604-4 80-6111-6614-3 80-6114-8890-1

1.2. Recommended use and restrictions on use

Recommended use
Re-enterable encapsulant

1.3. Supplier's details

Address:	3M New Zealand Ltd, 94 Apollo Drive, Rosedale 0632, Auckland
Telephone:	(09) 477 4040
E Mail:	innovation@nz.mmm.com
Website:	3m.co.nz

1.4. Emergency telephone number
24 hr Medical Emergency, National Poisons Centre, 0800 764 766 (0800 POISON)

This product is a kit or a multipart product which consists of multiple, independently packaged components. A Safety Data Sheet for each of these components is included. Please do not separate the component Safety Data Sheets from this cover page. The document numbers of the SDSs for components of this product are:

17-9246-4, 17-9245-6

TRANSPORT INFORMATION

80-6111-6604-4, 80-6111-6614-3, 80-6114-8890-1

NEW ZEALAND LAND TRANSPORT:
UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., (Methyldidecylamine), 9, III
NOT RESTRICTED FOR ROAD / RAIL TRANSPORT, Environmentally Hazardous Substance Exception
As per Land Transport Rule: Dangerous Goods 2005, Rule 45001, 1.4(2)(b). [Refer Special Provision 375, United Nations Recommendations on the Transport of Dangerous Goods, 19th revised edition]

IATA: International Air Transport Association
UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., (Methyldidecylamine), 9, III
NOT RESTRICTED FOR AIR TRANSPORT as per Special Provision A197, Environmentally Hazardous Substance Exception

IMO: International Maritime Organization
UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., (Methyldidecylamine), 9, III
NOT RESTRICTED BY SEA as per IMDG Code 2.10.2.7, Marine Pollutant Exception

Revision information:
Kit: Component document group number(s) information was modified.
New Zealand Kit Hazard Statements information was added.
New Zealand Kit Transportation Statement information was added.
Section 1: Product identification numbers information was modified.
Section 14: Marine Pollutant Technical Name information was added.
Section 14: Special Instructions ADG Group 1 information was added.
Section 14: Special Instructions IATA Group 1 information was added.
Section 14: Special Instructions IMDG Group 1 information was added.

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Safety Data Sheet

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Issue Date:	24/10/2017	**Supersedes date:**	04/01/2015

This Safety Data Sheet has been prepared in accordance with the New Zealand, Hazardous Substances and New Organisms Act 1996 (HSNO Act) and Regulations, as amended.

SECTION 1: Identification

1.1. Product identifier
3M 8882 High Gel Reenterable Encapsulant (Part B)

1.2. Recommended use and restrictions on use

Recommended use
Re-enterable Encapsulation.

1.3. Supplier's details

Address:	3M New Zealand Ltd, 94 Apollo Drive, Rosedale 0632, Auckland
Telephone:	(09) 477 4040
E Mail:	innovation@nz.mmm.com
Website:	3m.co.nz

1.4. Emergency telephone number
24 hr Medical Emergency, National Poisons Centre, 0800 764 766 (0800 POISON)

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

Classified as hazardous according to the New Zealand, Hazardous Substances (Minimum Degrees of Hazard) Regulations 2001 as amended.
Classified as a Dangerous Good according to; New Zealand, Land Transport Rule: Dangerous Goods 2005 (Rule 45001/1) as amended, NZS 5433:2012 Transport of Dangerous Goods on Land, UN Model Regulations on the Transport of Dangerous Goods, International Maritime Dangerous Goods Code and IATA Dangerous Goods Regulations. For transport classification, refer to SECTION 14: Transport Information.

HSNO classification
9.1A Aquatic toxicity
9.3C Terrestrial vertebrate toxicity

2.2. Label elements
SIGNAL WORD
WARNING!

Symbols:
Environment |

Pictograms

HAZARD STATEMENTS:

H410	Very toxic to aquatic life with long lasting effects.
H433	Harmful to terrestrial vertebrates.

PRECAUTIONARY STATEMENTS

Prevention:

P273	Avoid release to the environment.

Disposal:

P501	Dispose of contents/container in accordance with applicable local/regional/national/international regulations.

2.3. Other hazards
All or part of the classification is based on toxicity test data.

SECTION 3: Composition/information on ingredients

Ingredient	CAS Nbr	% by Weight
Hydrotreated heavy naphthenic petroleum distillates	64742-52-5	55 - 75
1,3-Butadiene, homopolymer, hydroxy-terminated	69102-90-5	20 - 30
N-methyldidecylamine	7396-58-9	5 - 10

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation
Remove person to fresh air. If you feel unwell, get medical attention.

Skin contact
Wash with soap and water. If signs/symptoms develop, get medical attention.

Eye contact
Flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms persist, get medical attention.

If swallowed
Rinse mouth. If you feel unwell, get medical attention.

4.2. Most important symptoms and effects, both acute and delayed
See Section 11.1 Information on toxicological effects

4.3. Indication of any immediate medical attention and special treatment required

Not applicable.

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media
In case of fire: Use a carbon dioxide or dry chemical extinguisher to extinguish.

5.2. Special hazards arising from the substance or mixture
None inherent in this product.

Hazardous Decomposition or By-Products

Substance	Condition
Hydrocarbons.	During combustion.
Carbon monoxide.	During combustion.
Carbon dioxide.	During combustion.

5.3. Special protective actions for fire-fighters
No special protective actions for fire-fighters are anticipated.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Evacuate area. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

6.2. Environmental precautions
Avoid release to the environment. For larger spills, cover drains and build dykes to prevent entry into sewer systems or bodies of water.

6.3. Methods and material for containment and cleaning up
Contain spill. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue with an appropriate solvent selected by a qualified and authorised person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and Safety Data Sheet. Seal the container. Dispose of collected material as soon as possible.

SECTION 7: Handling and storage

Refer to Section 15: HSNO Controls for more information.

7.1. Precautions for safe handling
Avoid eye contact. For industrial or professional use only. Avoid breathing dust/fume/gas/mist/vapours/spray. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Avoid release to the environment. Avoid contact with oxidising agents (eg. chlorine, chromic acid etc.)

7.2. Conditions for safe storage including any incompatibilities
Store away from acids. Store away from strong bases. Store away from oxidising agents.

7.3. Approved handler test certificate
Not required

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits
If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

Ingredient	CAS Nbr	Agency	Limit type	Additional comments
Paraffin oil	64742-52-5	New Zealand WES	TWA(as mist)(8 hours):5 mg/m3;STEL(as mist)(15 minutes):10 mg/m3	

ACGIH : American Conference of Governmental Industrial Hygienists
AIHA : American Industrial Hygiene Association
CMRG : Chemical Manufacturer's Recommended Guidelines
New Zealand WES : New Zealand Workplace Exposure Standards.
TWA: Time-Weighted-Average
STEL: Short Term Exposure Limit
ppm: parts per million
mg/m^3: milligrams per cubic metre
CEIL: Ceiling

8.2. Exposure controls

8.2.1. Engineering controls
Use in a well-ventilated area. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapours/spray. If ventilation is not adequate, use respiratory protection equipment.

8.2.2. Personal protective equipment (PPE)

Eye/face protection
None required.

Skin/hand protection
Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing. Note: Nitrile gloves may be worn over polymer laminate gloves to improve dexterity.
Gloves made from the following material(s) are recommended: Polymer laminate

Respiratory protection

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:
Half facepiece or full facepiece air-purifying respirator suitable for organic vapors and particulates

For questions about suitability for a specific application, consult with your respirator manufacturer.

Refer AS/NZS 1715 - Selection, use and maintenance of respiratory protective equipment and AS/NZS 1716 - Respiratory protective devices.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid.

Specific Physical Form:	Resin
Appearance/Odour	Clear, light amber, oily liquid, mild odour
Odour threshold	*No data available.*
pH	*Not applicable.*
Melting point/Freezing point	*Not applicable.*
Boiling point/Initial boiling point/Boiling range	>= 110 ºC
Flash point	>=110 ºC [*Test Method:*Pensky-Martens Closed Cup]
Evaporation rate	*No data available.*
Flammability (solid, gas)	Not applicable.
Flammable Limits(LEL)	*No data available.*
Flammable Limits(UEL)	*No data available.*
Vapour pressure	666.6 Pa [@ 20 ºC]
Vapour density	*No data available.*
Density	0.9 g/ml
Relative density	0.9 [*Ref Std:*WATER=1]
Water solubility	Nil
Solubility- non-water	*No data available.*
Partition coefficient: n-octanol/water	*No data available.*
Autoignition temperature	*No data available.*
Decomposition temperature	*No data available.*
Viscosity	*No data available.*
Average particle size	*No data available.*
Bulk density	*No data available.*
Molecular weight	*No data available.*
Volatile organic compounds (VOC)	*No data available.*
Percent volatile	*No data available.*
Softening point	*No data available.*
VOC less H2O & exempt solvents	*No data available.*

SECTION 10: Stability and reactivity

10.1 Reactivity
This material is considered to be non reactive under normal use conditions

10.2 Chemical stability
Stable.

10.3 Possibility of hazardous reactions
Hazardous polymerisation will not occur.

10.4 Conditions to avoid
None known.

10.5 Incompatible materials
Strong oxidising agents.
Strong acids.
Strong bases.
Reducing agents.

No data available.

10.6 Hazardous decomposition products

Substance	Condition
None known.	

Refer to Section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labelling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

11.1 Information on Toxicological effects

Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

Inhalation
Respiratory tract irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Skin contact
Dermal Defatting: Signs/symptoms may include localised redness, itching, drying and cracking of skin.

Eye contact
Contact with the eyes during product use is not expected to result in significant irritation.

Ingestion
Gastrointestinal irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhoea.

Toxicological Data
If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

Acute Toxicity

Name	Route	Species	Value
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
Hydrotreated heavy naphthenic petroleum distillates	Dermal	Rabbit	LD50 > 2,000 mg/kg
Hydrotreated heavy naphthenic petroleum distillates	Ingestion	Rat	LD50 > 5,000 mg/kg
1,3-Butadiene, homopolymer, hydroxy-terminated	Dermal		LD50 estimated to be > 5,000 mg/kg
1,3-Butadiene, homopolymer, hydroxy-terminated	Ingestion		LD50 estimated to be 2,000 - 5,000 mg/kg
N-methyldidecylamine	Dermal	Rabbit	LD50 > 5,000 mg/kg
N-methyldidecylamine	Ingestion	Rat	LD50 990 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Hydrotreated heavy naphthenic petroleum distillates	Rabbit	Minimal irritation
N-methyldidecylamine	Rabbit	Corrosive

Serious Eye Damage/Irritation

Name	Species	Value
Hydrotreated heavy naphthenic petroleum distillates	Rabbit	Mild irritant
N-methyldidecylamine	Rabbit	Corrosive

Skin Sensitisation

Name	Species	Value
Hydrotreated heavy naphthenic petroleum distillates	Guinea pig	Not sensitizing

Respiratory Sensitisation

For the component/components, either no data are currently available or the data are not sufficient for classification.

Germ Cell Mutagenicity

Name	Route	Value
N-methyldidecylamine	In Vitro	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
Hydrotreated heavy naphthenic petroleum distillates	Ingestion	Rat	Not carcinogenic
Hydrotreated heavy naphthenic petroleum distillates	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification

Reproductive Toxicity

Reproductive and/or Developmental Effects

For the component/components, either no data are currently available or the data are not sufficient for classification.

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Hydrotreated heavy naphthenic petroleum distillates	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	

Specific Target Organ Toxicity - repeated exposure

For the component/components, either no data are currently available or the data are not sufficient for classification.

Aspiration Hazard

For the component/components, either no data are currently available or the data are not sufficient for classification.

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

SECTION 12: Ecological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. Additional information leading to material classification in Section 2 is available upon request. In addition, environmental fate and effects data on ingredients may not be reflected in this section because an ingredient is present below the threshold for labelling, an ingredient is not expected to be available for exposure, or the data is considered not relevant to the material as a whole.

12.1. Toxicity

Ecotoxic to the aquatic environment.
9.1A Aquatic toxicity

Ecotoxic to terrestrial vertebrates
9.3C Terrestrial vertebrate toxicity

No product test data available.

Material	CAS Number	Organism	Type	Exposure	Test endpoint	Test result
1,3-Butadiene, homopolymer, hydroxy-terminated	69102-90-5		Data not available or insufficient for classification			
N-methyldidecylamine	7396-58-9	Fathead minnow	Estimated	96 hours	LC50	1.67 mg/l
N-methyldidecylamine	7396-58-9	Green Algae	Experimental	72 hours	EC50	0.004 mg/l
N-methyldidecylamine	7396-58-9	Green Algae	Experimental	72 hours	NOEC	0.002 mg/l
N-methyldidecylamine	7396-58-9	Rainbow trout	Experimental	96 hours	LC50	0.41 mg/l
N-methyldidecylamine	7396-58-9	Water flea	Experimental	48 hours	EC50	0.024 mg/l
Hydrotreated heavy naphthenic petroleum distillates	64742-52-5	Water flea	Experimental	21 days	NOEC	>1,000 mg/l
Hydrotreated heavy naphthenic petroleum distillates	64742-52-5	Water flea	Experimental	48 hours	EC50	>1,000 mg/l
Hydrotreated heavy naphthenic petroleum distillates	64742-52-5	Green algae	Estimated	96 hours	EC50	>100 mg/l
Hydrotreated heavy naphthenic petroleum distillates	64742-52-5	Water flea	Estimated	48 hours	EC50	>100 mg/l

12.2. Persistence and degradability

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
1,3-Butadiene, homopolymer, hydroxy-	69102-90-5	Data not available or insufficient for	N/A	N/A	N/A	N/A

terminated		classification				
N-methyldidecylamine	7396-58-9	Estimated Biodegradation	28 days	BOD	72 % weight	OECD 301C - MITI test (I)
Hydrotreated heavy naphthenic petroleum distillates	64742-52-5	Experimental Biodegradation	28 days	CO2 evolution	6 % weight	OECD 301B - Modified sturm or CO2
N-methyldidecylamine	7396-58-9	Experimental Biodegradation	28 days	CO2 evolution	74 % weight	OECD 301B - Modified sturm or CO2
Hydrotreated heavy naphthenic petroleum distillates	64742-52-5	Data not available or insufficient for classification	N/A	N/A	N/A	N/A

12.3 : Bioaccumulative potential

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
1,3-Butadiene, homopolymer, hydroxy-terminated	69102-90-5	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Hydrotreated heavy naphthenic petroleum distillates	64742-52-5	Estimated BCF - Other		Bioaccumulation factor	17	Other methods
N-methyldidecylamine	7396-58-9	Estimated Bioconcentration		Bioaccumulation factor	6.67	Other methods
Hydrotreated heavy naphthenic petroleum distillates	64742-52-5	Data not available or insufficient for classification	N/A	N/A	N/A	N/A

12.4. Mobility in soil
Please contact manufacturer for more details

12.5 Other adverse effects
No information available.

SECTION 13: Disposal considerations

13.1. Disposal methods
See Section 11.1 Information on toxicological effects

Dispose of waste product in a permitted industrial waste facility. As a disposal alternative, incinerate in a permitted waste incineration facility. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective

regulating authorities to determine the available treatment and disposal facilities.

Packaging (that may or may not contain any residual substance) may be lawfully disposed of by householders or other consumers through public or commercial waste collection services.

SECTION 14: Transport Information

New Zealand Land Transport Rule: Dangerous Goods - Road/Rail Transport
UN No.: UN3082
Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. , (N-methyldidecylamine)
Class/Division: 9
Sub Risk: Not applicable.
Packing Group: III
Special Instructions: Not restricted, environmentally hazardous substance exception.
Hazchem Code: 3Z
IERG: 47

International Air Transport Association (IATA) - Air Transport
UN No.: UN3082
Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. , (N-methyldidecylamine)
Class/Division: 9
Sub Risk: Not applicable.
Packing Group: III
Special Instructions: Not restricted, as per Special Provision A197, environmentally hazardous substance exception.

International Maritime Dangerous Goods Code (IMDG) - Marine Transport
UN No.: UN3082
Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. , (N-methyldidecylamine)
Class/Division: 9
Sub Risk: Not applicable.
Packing Group: III
Marine Pollutant: Not applicable.
Special Instructions: Not restricted, as per IMDG code 2.10.2.7, marine pollutant exception.

SECTION 15: Regulatory information

HSNO Approval number	HSR002670
Group standard name	Surface Coatings and Colourants (Subsidiary Hazard) Group Standard 2006
HSNO Hazard classification	Refer to Section 2: Hazard identification

NZ Inventory of Chemicals (NZIoC) Status
All ingredients are listed on the New Zealand Inventory of Chemicals.

HSNO Controls

Approved handler test certificate	Not required
Location and transit Depot certification test	Not required
Hazardous atmosphere zone	Not required
Fire extinguishers	Not required
Emergency response plan	100 L or 100 kg (for a HSNO 9.1A substance); or 1,000 L or 1,000 kg (for a HSNO 6.1D, 6.5A, 6.5B, 9.1B or 9.1C substance); or 10,000 L or 10,000 kg (for a HSNO 6.6A, 6.8A, 6.9A, 8.3A, 9.1D substance)
Secondary containment	100 L or 100 kg (for a HSNO 9.1A substance); or 1,000 L or 1,000 kg (for a

	HSNO 6.1D, 6.5A, 6.5B, 9.1B or 9.1C substance); or 10,000 L or 10,000 kg (for a HSNO 6.6A, 6.8A, 6.9A, 8.3A, 9.1D substance)
Tracking	Not required
Warning signage	100 L or 100 kg (for a HSNO 9.1A substance); or 1,000 L or 1,000 kg (for a HSNO 8.3A, 9.1B or 9.1C substance); or 10,000 L or 10,000 kg (for a HSNO 6.1D or 9.1D substance)

SECTION 16: Other information

Revision information:
Section 1: Product identification numbers information was deleted.
Label: GHS Supplemental Information information was added.
Label: Graphic information was added.
Label: Symbol information was added.
Section 2: NZ Classification statements (Transportation) information was modified.
HSNO Classification. information was modified.
Environmental Hazard Statements information was modified.
Section 2: NZ Pictograms information was added.
Section 2: NZ Precautionary Statements - Prevention information was modified.
Section 2: NZ Signal Word information was added.
Section 2: NZ Symbols information was added.
Section 6: Accidental release personal information information was modified.
Section 7: Conditions safe storage information was modified.
Section 8: Appropriate Engineering controls information information was modified.
Section 8: Eye protection information information was added.
Section 8: Eye protection standard information information was deleted.
Section 8: Eye/face protection information information was deleted.
Section 8: Occupational exposure limit table information was modified.
Section 8: Personal Protection - Eye information information was deleted.
Section 8: Personal Protection - Skin/hand information information was modified.
Section 8: Skin protection - recommended gloves information information was modified.
Section 9: Property description for optional properties information was modified.
Section 9: Specific physical form information information was added.
Section 10: Materials to avoid physical property information was modified.
Section 11: Aspiration Hazard text information was added.
Section 11: Respiratory Sensitization text information was added.
Section 11: Specific Target Organ Toxicity - repeated exposure text information was added.
Section 11: Specific Target Organ Toxicity - single exposure text information was added.
Section 12: Component ecotoxicity information information was modified.
Section 12: Ecotoxic to terrestrial vertebrates information was added.
Section 12: NZ Environmental aquatic information information was modified.
Section 12: NZ Environmental terrestrial vertebrate information was added.
Section 12: Persistence and Degradability information information was modified.
Section 12:Bioccumulative potential information information was modified.
Section 13: Standard Phrase Category Waste GHS information was modified.
Section 14: Class/Div Group 2 information was added.
Section 14: IERG Group 1 information was added.
Section 14: IERG Group 2 information was added.
Section 14: Marine Pollutant Technical Name information was added.
Section 14: Packing Group Group 1 information was added.
Section 14: Packing Group Group 2 information was added.
Section 14: Proper Shipping Name Technical Name Group 1 information was added.
Section 14: Special Instructions ADG Group 1 information was added.
Section 14: Special Instructions Group 2 information was added.
Section 14: Special Instructions IATA Group 1 information was added.

Section 14: Special Instructions IATA Group 2 information was added.
Section 14: Special Instructions IMDG Group 1 information was added.
Section 14: Special Instructions IMDG Group 2 information was added.
Section 14: Transport Class/Div Group 1 information was added.
Section 14: Transport Information information was added.
Section 14: Transportation information information was deleted.
Section 14: Transportation Sub Risk Group 1 information was added.
Section 14: Transportation Sub Risk Group 2 information was added.
Section 14: UN Number IATA Group 1 information was added.
Section 14: UN Number IATA Group 2 information was added.
Section 14: UN Number information was added.
Section 14: UN Proper Shipping Name Group 1 information was added.
Section 14: UN Proper Shipping Name Group 2 information was added.
Section 14: UN Proper Shipping Name IATA Group 1 information was added.
Section 14: UN Proper Shipping Name IATA Group 2 information was added.

The information in this Safety Data Sheet (SDS) is believed to be correct as of the date of issue. TO THE EXTENT PERMITTED BY LAW, 3M MAKES NO WARRANTY, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY, OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR COURSE OF PERFORMANCE OR USAGE OF TRADE. User is responsible for determining whether the 3M product is fit for a particular purpose and suitable for user's method of use or application. Given the variety of factors that can affect the use and application of a 3M product, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluates the 3M product to determine whether it is fit for a particular purpose and suitable for user's method of use or application. 3M provides information in electronic form as a service to customers. Due to the remote possibility of electronic transfer may have resulted in errors, omissions or alterations in this information; 3M makes no representations as to its completeness or accuracy. In addition, information obtained from a database may not be as current as the information in the SDS available directly from 3M.

3M New Zealand SDS are available at 3M New Zealand Website: http://solutions.3mnz.co.nz

Safety Data Sheet

Document group:	17-9246-4	**Version number:**	3.00
Issue Date:	05/03/2017	**Supersedes date:**	04/01/2015

This Safety Data Sheet has been prepared in accordance with the New Zealand, Hazardous Substances and New Organisms Act 1996 (HSNO Act) and Regulations, as amended.

SECTION 1: Identification

1.1. Product identifier
3M 8882 High Gel Reenterable Encapsulant (Part A)

1.2. Recommended use and restrictions on use

Recommended use
Re-enterable Encapsulation.

1.3. Supplier's details

Address:	3M New Zealand Ltd, 94 Apollo Drive, Rosedale 0632, Auckland
Telephone:	(09) 477 4040
E Mail:	innovation@nz.mmm.com
Website:	3m.co.nz

1.4. Emergency telephone number
24 hr Medical Emergency, National Poisons Centre, 0800 764 766 (0800 POISON)

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

Classified as hazardous according to the New Zealand, Hazardous Substances (Minimum Degrees of Hazard) Regulations 2001 as amended.
Not classified as a Dangerous Good according to; New Zealand, Land Transport Rule: Dangerous Goods 2005 (Rule 45001/1) as amended, NZS 5433:2012 Transport of Dangerous Goods on Land, UN Model Regulations on the Transport of Dangerous Goods, International Maritime Dangerous Goods Code and IATA Dangerous Goods Regulations.

HSNO classification
6.5A Respiratory sensitiser
6.5B Skin sensitiser
6.8A Known/presumed human reproductive or developmental toxicant.
9.1C Aquatic toxicity

2.2. Label elements
SIGNAL WORD
DANGER!

Symbols:
Health Hazard |

Pictograms

HAZARD STATEMENTS:

H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317	May cause an allergic skin reaction.
H360	May damage fertility or the unborn child.
H412	Harmful to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS

Prevention:

P201	Obtain special instructions before use.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P285	In case of inadequate ventilation wear respiratory protection.
P280E	Wear protective gloves.

Response:

P304 + P341	IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
P342 + P311	If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
P308 + P313	IF exposed or concerned: Get medical advice/attention.

Disposal:

P501	Dispose of contents/container in accordance with applicable local/regional/national/international regulations.

SECTION 3: Composition/information on ingredients

Ingredient	CAS Nbr	% by Weight
Soybean oil	8001-22-7	64 - 67
Copolymer	25655-35-0	24 - 28
epoxidized soybean oil	8013-07-8	6 - 8
2,6-Di-tert-butyl-p-cresol	128-37-0	< 0.8
Toluene	108-88-3	< 0.3
Maleic anhydride	108-31-6	< 0.3

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation
Remove person to fresh air. If you feel unwell, get medical attention.

Skin contact
Immediately wash with soap and water. Remove contaminated clothing and wash before reuse. If signs/symptoms develop, get medical attention.

Eye contact
Flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms persist, get medical attention.

If swallowed
Rinse mouth. If you feel unwell, get medical attention.

4.2. Most important symptoms and effects, both acute and delayed
See Section 11.1 Information on toxicological effects

4.3. Indication of any immediate medical attention and special treatment required
Not applicable.

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media
In case of fire: Use a carbon dioxide or dry chemical extinguisher to extinguish.

5.2. Special hazards arising from the substance or mixture
None inherent in this product.

Hazardous Decomposition or By-Products

Substance	Condition
Carbon monoxide.	During combustion.
Carbon dioxide.	During combustion.

5.3. Special protective actions for fire-fighters
No special protective actions for fire-fighters are anticipated.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Evacuate area. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

6.2. Environmental precautions
Avoid release to the environment. For larger spills, cover drains and build dykes to prevent entry into sewer systems or bodies of water.

6.3. Methods and material for containment and cleaning up
Contain spill. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue with an appropriate solvent selected by a qualified and authorised person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and Safety Data Sheet. Seal the container. Dispose of collected material as soon as possible.

SECTION 7: Handling and storage

Refer to Section 15: HSNO Controls for more information.

7.1. Precautions for safe handling
For industrial or professional use only. Do not handle until all safety precautions have been read and understood. Do not breathe dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wash contaminated clothing before reuse. Avoid contact with oxidising agents (eg. chlorine, chromic acid etc.) Use personal protective equipment (eg. gloves, respirators…) as required.

7.2. Conditions for safe storage including any incompatibilities
Store away from acids. Store away from oxidising agents.

7.3. Approved handler test certificate
Not required

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits
If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

Ingredient	CAS Nbr	Agency	Limit type	Additional comments
Maleic anhydride	108-31-6	ACGIH	TWA(inhalable fraction and vapor):0.01 mg/m3;TWA:0.01 mg/m3	Sensitizer, A4: Not class. as human carcin, Dermal/Respiratory Sensitizer
Maleic anhydride	108-31-6	New Zealand WES	TWA(8 hours): 1 mg/m3 (0.25 ppm)	Capable of csng resp/skin sens
Toluene	108-88-3	ACGIH	TWA:20 ppm	A4: Not class. as human carcinogin
Toluene	108-88-3	New Zealand WES	TWA(8 hours): 188 mg/m3 (50 ppm)	Skin
2,6-Di-tert-butyl-p-cresol	128-37-0	ACGIH	TWA(inhalable fraction and vapor):2 mg/m3	A4: Not class. as human carcinogin
2,6-Di-tert-butyl-p-cresol	128-37-0	New Zealand WES	TWA(8 hours):10 mg/m3	
Vegetable oil mist, total dust.	8001-22-7	New Zealand WES	TWA(as mist)(8 hours):10 mg/m3	

ACGIH : American Conference of Governmental Industrial Hygienists
AIHA : American Industrial Hygiene Association
CMRG : Chemical Manufacturer's Recommended Guidelines
New Zealand WES : New Zealand Workplace Exposure Standards.
TWA: Time-Weighted-Average
STEL: Short Term Exposure Limit
ppm: parts per million
mg/m^3: milligrams per cubic metre
CEIL: Ceiling

8.2. Exposure controls

8.2.1. Engineering controls
Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapours/spray. If ventilation is not adequate, use respiratory protection equipment.

8.2.2. Personal protective equipment (PPE)

Eye/face protection
None required.

Skin/hand protection
Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing. Note: Nitrile gloves may be worn over polymer laminate gloves to improve dexterity.
Gloves made from the following material(s) are recommended: Polymer laminate

If this product is used in a manner that presents a higher potential for exposure (eg. spraying, high splash potential etc.), then use of protective coveralls may be necessary. Select and use body protection to prevent contact based on the results of an exposure assessment. The following protective clothing material(s) are recommended: Apron - polymer laminate

Respiratory protection

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:
Half facepiece or full facepiece air-purifying respirator suitable for organic vapors and particulates

For questions about suitability for a specific application, consult with your respirator manufacturer.

Refer AS/NZS 1715 - Selection, use and maintenance of respiratory protective equipment and AS/NZS 1716 - Respiratory protective devices.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid.
Appearance/Odour	Viscous, hazy to clear amber, mild hydrocarbon aroma
Odour threshold	*No data available.*
pH	*Not applicable.*
Melting point/Freezing point	*Not applicable.*
Boiling point/Initial boiling point/Boiling range	246.1 ºC
Flash point	>=148.9 ºC [*Test Method:*Closed Cup]
Evaporation rate	*No data available.*
Flammability (solid, gas)	Not applicable.
Flammable Limits(LEL)	*No data available.*
Flammable Limits(UEL)	*No data available.*
Vapour pressure	<=186,158.4 Pa [@ 55 ºC]
Vapour density	*No data available.*
Density	0.89 g/ml
Relative density	0.89 [*Ref Std:*WATER=1]
Water solubility	Negligible
Solubility- non-water	*No data available.*
Partition coefficient: n-octanol/water	*No data available.*
Autoignition temperature	*No data available.*
Decomposition temperature	*No data available.*
Viscosity	*No data available.*
Average particle size	*No data available.*
Bulk density	*No data available.*

Molecular weight	*No data available.*
Volatile organic compounds (VOC)	*No data available.*
Percent volatile	*No data available.*
Softening point	*No data available.*
VOC less H2O & exempt solvents	*No data available.*

SECTION 10: Stability and reactivity

10.1 Reactivity
This material is considered to be non reactive under normal use conditions

10.2 Chemical stability
Stable.

10.3 Possibility of hazardous reactions
Hazardous polymerisation will not occur.

10.4 Conditions to avoid
None known.

10.5 Incompatible materials
Strong acids.
Strong oxidising agents.

No data available.

10.6 Hazardous decomposition products

Substance	Condition
Hydrocarbons.	Not specified.

Refer to Section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labelling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

11.1 Information on Toxicological effects

Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

Inhalation
Allergic respiratory reaction: Signs/symptoms may include difficulty breathing, wheezing, cough, and tightness of chest. May cause additional health effects (see below).

Skin contact
Contact with the skin during product use is not expected to result in significant irritation. Allergic skin reaction (non-photo

induced): Signs/symptoms may include redness, swelling, blistering, and itching.

Eye contact
Contact with the eyes during product use is not expected to result in significant irritation.

Ingestion
Gastrointestinal irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhoea. May cause additional health effects (see below).

Additional Health Effects:

Reproductive/Developmental Toxicity:
Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

Toxicological Data
If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

Acute Toxicity

Name	Route	Species	Value
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
Soybean oil	Dermal		LD50 estimated to be > 5,000 mg/kg
Soybean oil	Ingestion		LD50 estimated to be > 5,000 mg/kg
epoxidized soybean oil	Dermal	Rabbit	LD50 > 20,000 mg/kg
epoxidized soybean oil	Ingestion	Rat	LD50 > 5,000 mg/kg
2,6-Di-tert-butyl-p-cresol	Dermal	Rat	LD50 > 2,000 mg/kg
2,6-Di-tert-butyl-p-cresol	Ingestion	Rat	LD50 > 2,930 mg/kg
Toluene	Dermal	Rat	LD50 12,000 mg/kg
Toluene	Inhalation-Vapor (4 hours)	Rat	LC50 30 mg/l
Toluene	Ingestion	Rat	LD50 5,550 mg/kg
Maleic anhydride	Dermal	Rabbit	LD50 2,620 mg/kg
Maleic anhydride	Ingestion	Rat	LD50 400 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Soybean oil	Professional judgement	Minimal irritation
epoxidized soybean oil	Rabbit	No significant irritation
2,6-Di-tert-butyl-p-cresol	Human and animal	Minimal irritation
Toluene	Rabbit	Irritant
Maleic anhydride	Rabbit	Corrosive

Serious Eye Damage/Irritation

Name	Species	Value
Soybean oil	Professional judgement	Mild irritant
epoxidized soybean oil	Rabbit	No significant irritation
2,6-Di-tert-butyl-p-cresol	Rabbit	Mild irritant
Toluene	Rabbit	Moderate irritant

Maleic anhydride	Rabbit	Corrosive

Skin Sensitisation

Name	Species	Value
epoxidized soybean oil	Guinea pig	Not sensitizing
2,6-Di-tert-butyl-p-cresol	Human	Some positive data exist, but the data are not sufficient for classification
Toluene	Guinea pig	Not sensitizing
Maleic anhydride	Multiple animal species	Sensitising

Respiratory Sensitisation

Name	Species	Value
Maleic anhydride	Human	Sensitising

Germ Cell Mutagenicity

Name	Route	Value
epoxidized soybean oil	In Vitro	Not mutagenic
2,6-Di-tert-butyl-p-cresol	In Vitro	Not mutagenic
2,6-Di-tert-butyl-p-cresol	In vivo	Not mutagenic
Toluene	In Vitro	Not mutagenic
Toluene	In vivo	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
epoxidized soybean oil	Ingestion	Rat	Not carcinogenic
2,6-Di-tert-butyl-p-cresol	Ingestion	Multiple animal species	Some positive data exist, but the data are not sufficient for classification
Toluene	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification
Toluene	Ingestion	Rat	Some positive data exist, but the data are not sufficient for classification
Toluene	Inhalation	Mouse	Some positive data exist, but the data are not sufficient for classification

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test result	Exposure Duration
epoxidized soybean oil	Ingestion	Not toxic to female reproduction	Rat	NOAEL 1,000 mg/kg/day	1 generation
epoxidized soybean oil	Ingestion	Not toxic to male reproduction	Rat	NOAEL 1,000 mg/kg/day	1 generation
epoxidized soybean oil	Ingestion	Not toxic to development	Rat	NOAEL 1,000 mg/kg/day	1 generation
2,6-Di-tert-butyl-p-cresol	Ingestion	Not toxic to female reproduction	Rat	NOAEL 500 mg/kg/day	2 generation
2,6-Di-tert-butyl-p-cresol	Ingestion	Not toxic to male reproduction	Rat	NOAEL 500 mg/kg/day	2 generation
2,6-Di-tert-butyl-p-cresol	Ingestion	Some positive developmental data exist, but the data are not sufficient for classification	Rat	NOAEL 100 mg/kg/day	2 generation

Toluene	Inhalation	Some positive female reproductive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure
Toluene	Inhalation	Some positive male reproductive data exist, but the data are not sufficient for classification	Rat	NOAEL 2.3 mg/l	1 generation
Toluene	Ingestion	Toxic to development	Rat	LOAEL 520 mg/kg/day	during gestation
Toluene	Inhalation	Toxic to development	Human	NOAEL Not available	poisoning and/or abuse

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Toluene	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
Toluene	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
Toluene	Inhalation	immune system	Some positive data exist, but the data are not sufficient for classification	Mouse	NOAEL 0.004 mg/l	3 hours
Toluene	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	poisoning and/or abuse
Maleic anhydride	Inhalation	respiratory irritation	May cause respiratory irritation	Human	LOAEL 0.001 mg/l	occupational exposure

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
epoxidized soybean oil	Ingestion	liver | kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1,250 mg/kg/day	2 years
2,6-Di-tert-butyl-p-cresol	Ingestion	liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 250 mg/kg/day	28 days
2,6-Di-tert-butyl-p-cresol	Ingestion	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 500 mg/kg/day	2 generation
2,6-Di-tert-butyl-p-cresol	Ingestion	blood	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 420 mg/kg/day	40 days
2,6-Di-tert-butyl-p-cresol	Ingestion	endocrine system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 25 mg/kg/day	2 generation
2,6-Di-tert-butyl-p-cresol	Ingestion	heart	Some positive data exist, but the data are not sufficient for classification	Mouse	NOAEL 3,480 mg/kg/day	10 weeks
Toluene	Inhalation	auditory system | nervous system | eyes | olfactory system	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	poisoning and/or abuse
Toluene	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 2.3 mg/l	15 months
Toluene	Inhalation	heart | liver | kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 11.3 mg/l	15 weeks
Toluene	Inhalation	endocrine system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1.1 mg/l	4 weeks
Toluene	Inhalation	immune system	Some positive data exist, but the data are not sufficient for classification	Mouse	NOAEL Not available	20 days

Toluene	Inhalation	bone, teeth, nails, and/or hair	Some positive data exist, but the data are not sufficient for classification	Mouse	NOAEL 1.1 mg/l	8 weeks
Toluene	Inhalation	hematopoietic system | vascular system	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure
Toluene	Ingestion	nervous system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 625 mg/kg/day	13 weeks
Toluene	Ingestion	heart	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 2,500 mg/kg/day	13 weeks
Toluene	Ingestion	liver | kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Multiple animal species	NOAEL 2,500 mg/kg/day	13 weeks
Toluene	Ingestion	hematopoietic system	Some positive data exist, but the data are not sufficient for classification	Mouse	NOAEL 600 mg/kg/day	14 days
Toluene	Ingestion	endocrine system	Some positive data exist, but the data are not sufficient for classification	Mouse	NOAEL 105 mg/kg/day	28 days
Toluene	Ingestion	immune system	Some positive data exist, but the data are not sufficient for classification	Mouse	NOAEL 105 mg/kg/day	4 weeks

Aspiration Hazard

Name	Value
Toluene	Aspiration hazard

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

SECTION 12: Ecological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. Additional information leading to material classification in Section 2 is available upon request. In addition, environmental fate and effects data on ingredients may not be reflected in this section because an ingredient is present below the threshold for labelling, an ingredient is not expected to be available for exposure, or the data is considered not relevant to the material as a whole.

12.1. Toxicity
Ecotoxic to the aquatic environment.
9.1C Aquatic toxicity

No product test data available.

Material	CAS Number	Organism	Type	Exposure	Test endpoint	Test result
epoxidized soybean oil	8013-07-8	Water flea	Experimental	24 hours	EC50	>100 mg/l
Maleic anhydride	108-31-6	Water flea	Experimental	48 hours	EC50	330 mg/l
Maleic anhydride	108-31-6	Fathead minnow	Experimental	96 hours	LC50	5 mg/l
Toluene	108-88-3	Water flea	Experimental	48 hours	EC50	3.78 mg/l
Toluene	108-88-3	Coho Salmon	Experimental	96 hours	LC50	5.5 mg/l
Toluene	108-88-3	Green Algae	Experimental	72 hours	EC50	12.5 mg/l
Maleic anhydride	108-31-6	Green Algae	Experimental	72 hours	NOEC	150 mg/l
Maleic	108-31-6	Water flea	Experimental	21 days	NOEC	10 mg/l

anhydride						
Toluene	108-88-3	Sheepshead Minnow	Experimental	28 days	NOEC	3.2 mg/l
Copolymer	25655-35-0		Data not available or insufficient for classification			
Soybean oil	8001-22-7		Data not available or insufficient for classification			
2,6-Di-tert-butyl-p-cresol	128-37-0	Water flea	Experimental	48 hours	EC50	0.48 mg/l
2,6-Di-tert-butyl-p-cresol	128-37-0	Green algae	Experimental	72 hours	Effect Concentration 10%	0.4 mg/l
2,6-Di-tert-butyl-p-cresol	128-37-0	Zebra Fish	Experimental	96 hours	LC50	>100 mg/l
2,6-Di-tert-butyl-p-cresol	128-37-0	Ricefish	Experimental	42 days	NOEC	0.053 mg/l
2,6-Di-tert-butyl-p-cresol	128-37-0	Water flea	Experimental	21 days	NOEC	0.023 mg/l
2,6-Di-tert-butyl-p-cresol	128-37-0	Green algae	Experimental	72 hours	EC50	>0.4 mg/l

12.2. Persistence and degradability

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
Toluene	108-88-3	Experimental Photolysis		Photolytic half-life (in air)	5.38 days (t 1/2)	Other methods
Maleic anhydride	108-31-6	Experimental Hydrolysis		Hydrolytic half-life	35.2 seconds (t 1/2)	Other methods
Copolymer	25655-35-0	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Maleic anhydride	108-31-6	Experimental Biodegradation	29 days	CO2 evolution	78.7 % weight	OECD 301B - Modified sturm or CO2
Toluene	108-88-3	Experimental Biodegradation	14 days	BOD	100 % weight	OECD 301C - MITI test (I)
Soybean oil	8001-22-7	Experimental Biodegradation	28 days	CO2 evolution	76 % weight	Other methods
epoxidized soybean oil	8013-07-8	Experimental Biodegradation	28 days	BOD	78 % weight	OECD 301D - Closed bottle test
2,6-Di-tert-butyl-p-cresol	128-37-0	Experimental Biodegradation	28 days	BOD	4.5 % weight	OECD 301C - MITI test (I)

12.3 : Bioaccumulative potential

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
Copolymer	25655-35-0	Data not available or insufficient for classification	N/A	N/A	N/A	N/A

epoxidized soybean oil	8013-07-8	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Soybean oil	8001-22-7	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Toluene	108-88-3	Experimental Bioconcentration		Log Kow	2.73	Other methods
Maleic anhydride	108-31-6	Experimental Bioconcentration		Log Kow	-2.61	Other methods
2,6-Di-tert-butyl-p-cresol	128-37-0	Experimental BCF-Carp	56 days	Bioaccumulation factor	1277	OECD 305E - Bioaccumulation flow-through fish test

12.4. Mobility in soil
Please contact manufacturer for more details

12.5 Other adverse effects
No information available.

SECTION 13: Disposal considerations

13.1. Disposal methods
See Section 11.1 Information on toxicological effects

Dispose of waste product in a permitted industrial waste facility. As a disposal alternative, incinerate in a permitted waste incineration facility. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

Packaging (that may or may not contain any residual substance) may be lawfully disposed of by householders or other consumers through public or commercial waste collection services.

SECTION 14: Transport Information

New Zealand Land Transport Rule: Dangerous Goods - Road/Rail Transport
UN No.: Not applicable.
Proper Shipping Name: Not applicable.
Class/Division: Not applicable.
Sub Risk: Not applicable.
Packing Group: Not applicable.

Hazchem Code:
IERG: Not applicable.

International Air Transport Association (IATA) - Air Transport
UN No.: Not applicable.
Proper Shipping Name: Not applicable.
Class/Division: Not applicable.

Sub Risk: Not applicable.
Packing Group: Not applicable.

International Maritime Dangerous Goods Code (IMDG) - Marine Transport
UN No.: Not applicable.
Proper Shipping Name: Not applicable.
Class/Division: Not applicable.
Sub Risk: Not applicable.
Packing Group: Not applicable.
Marine Pollutant: Not applicable.

SECTION 15: Regulatory information

HSNO Approval number	HSR002670
Group standard name	Surface Coatings and Colourants (Subsidiary Hazard) Group Standard 2006
HSNO Hazard classification	Refer to Section 2: Hazard identification

NZ Inventory of Chemicals (NZIoC) Status
All ingredients are listed on the New Zealand Inventory of Chemicals.

HSNO Controls

Approved handler test certificate	Not required
Location and transit Depot certification test	Not required
Hazardous atmosphere zone	Not required
Fire extinguishers	Not required
Emergency response plan	100 L or 100 kg (for a HSNO 9.1A substance); or 1,000 L or 1,000 kg (for a HSNO 6.1D, 6.5A, 6.5B, 9.1B or 9.1C substance); or 10,000 L or 10,000 kg (for a HSNO 6.6A, 6.8A, 6.9A, 8.3A, 9.1D substance)
Secondary containment	100 L or 100 kg (for a HSNO 9.1A substance); or 1,000 L or 1,000 kg (for a HSNO 6.1D, 6.5A, 6.5B, 9.1B or 9.1C substance); or 10,000 L or 10,000 kg (for a HSNO 6.6A, 6.8A, 6.9A, 8.3A, 9.1D substance)
Tracking	Not required
Warning signage	100 L or 100 kg (for a HSNO 9.1A substance); or 1,000 L or 1,000 kg (for a HSNO 8.3A, 9.1B or 9.1C substance); or 10,000 L or 10,000 kg (for a HSNO 6.1D or 9.1D substance)

SECTION 16: Other information

Revision information:
HSNO Classification. information was added.
Environmental Hazard Statements information was added.
Section 2: NZ Precautionary Statements - Disposal information was added.
Section 2: NZ Precautionary Statements - Prevention information was modified.
Section 6: Accidental release personal information information was modified.
Section 7: Conditions safe storage information was modified.
Section 7: Precautions safe handling information information was modified.
Section 8: Eye protection information information was added.
Section 8: Eye protection standard information information was deleted.
Section 8: Eye/face protection information information was deleted.
Section 8: Occupational exposure limit table information was modified.
Section 8: Personal Protection - Eye information information was deleted.
Section 8: Personal Protection - Skin/hand information information was modified.
Section 11: Acute Toxicity table information was modified.

Section 11: Health Effects - Ingestion information information was modified.
Section 11: Health Effects - Inhalation information information was modified.
Section 11: Health Effects - Skin information information was modified.
Section 11: Serious Eye Damage/Irritation Table information was modified.
Section 11: Skin Corrosion/Irritation Table information was modified.
Section 11: Target Organs - Repeated Table information was modified.
Section 12: Component ecotoxicity information information was modified.
Section 12: Ecotoxic to aquatic environment information was added.
Section 12: NZ Environmental aquatic information information was added.
Section 12: Persistence and Degradability information information was modified.
Section 12:Bioccumulative potential information information was modified.
Section 13: Standard Phrase Category Waste GHS information was modified.
Section 14: Class/Div Group 2 information was added.
Section 14: IERG Group 1 information was added.
Section 14: IERG Group 2 information was added.
Section 14: Marine Pollutant Technical Name information was added.
Section 14: Packing Group Group 1 information was added.
Section 14: Packing Group Group 2 information was added.
Section 14: Special Instructions ADG Group 1 information was added.
Section 14: Special Instructions Group 2 information was added.
Section 14: Special Instructions IATA Group 1 information was added.
Section 14: Special Instructions IATA Group 2 information was added.
Section 14: Special Instructions IMDG Group 1 information was added.
Section 14: Special Instructions IMDG Group 2 information was added.
Section 14: Transport Class/Div Group 1 information was added.
Section 14: Transportation information information was deleted.
Section 14: Transportation Sub Risk Group 1 information was added.
Section 14: Transportation Sub Risk Group 2 information was added.
Section 14: UN Number IATA Group 1 information was added.
Section 14: UN Number IATA Group 2 information was added.
Section 14: UN Number information was added.
Section 14: UN Proper Shipping Name Group 1 information was added.
Section 14: UN Proper Shipping Name Group 2 information was added.
Section 14: UN Proper Shipping Name IATA Group 1 information was added.
Section 14: UN Proper Shipping Name IATA Group 2 information was added.
Section 15: NZ Inventories information information was added.

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